

In re: Hyun-Chul Kim
Serial No.: 10/663,967
Filed: September 16, 2003
Page 8 of 11

REMARKS

Applicant appreciates the Office Action of June 22, 2005. Applicant has amended the specification as set out above and, therefore, requests withdrawal of the objections with respect to the specification. Furthermore, Applicant appreciates the consideration of the information disclosure statements of September 16, 2004 and October 14, 2003. Applicant has amended independent Claim 9 to further clarify the differences between the claims of the present invention and the cited reference. Applicant has also amended dependent Claims 11, 13 and 15 to conform to the amendments made to Claim 9 and has added new Claims 26 through 29 as set out above.

Election/Restrictions

The Office Action states the "[b]ecause applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse." See Office Action, page 2. Applicant would like to point out that Applicant did not claim any "supposed errors" and the election was made without traverse as the unpatentability of Species I would not necessarily imply unpatentability of Species II.

Objections to the Specification

The Office Action objects to page 6, lines 5 and 14 of the specification as reciting "as illustrates [sic] in Figure 1A, a substrate 100" instead of a "substrate 10." See Office Action, page 6. Applicant has amended the specification to recite a "substrate 10" as set out above. Accordingly, Applicant respectfully requests withdrawal of the objections to the specification.

The Section 102 Rejections

Claims 9-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 6,100,118 to Shih *et al.* (hereinafter "Shih"). See Office Action, page 3. Applicant respectfully disagrees. In particular, nothing in Shih discloses or suggests a buffer pattern as recited in independent Claim 9. However, Applicant has amended Claim 9 to incorporate recitations originally included in

In re: Hyun-Chul Kim
Serial No.: 10/663,967
Filed: September 16, 2003
Page 9 of 11

dependent Claim 15 to further clarify the differences between the claims of the present application and Shih. For example, amended Claim 9 recites:

A method of forming an integrated circuit device, comprising:
forming a window layer on an integrated circuit substrate that defines a fuse region such that the window layer is formed at an upper portion of the integrated circuit device and recessed beneath a surface of the integrated circuit device;

forming a conductive layer pattern and a buffer pattern on the integrated circuit substrate between the integrated circuit substrate and the window layer, the buffer pattern being between portions of the conductive layer pattern on the integrated circuit substrate; and

forming a fuse pattern between the buffer pattern and the window layer.

Applicant respectfully submits that at least the highlighted recitation of amended Claim 9 is neither disclosed nor suggested by Shih for at least the reasons discussed herein.

As a preliminary note, Applicant would like to point out that the Office Action points to various portions of Shih as teaching the recitations of original Claim 9, however, the Office Action never points to which elements of Shih correspond to the different elements of Claim 9. In other words, nothing in the Office Action states which portion of Shih supposedly discloses the buffer pattern as recited in Claim 9. Applicant respectfully submits that this is because nothing in Shih discloses or suggests a buffer pattern as recited in Claim 9. However, Applicant has amended Claim 9 to further clarify the differences between the claims of the present application and Shih.

Figures 1 through 4 of Shih and the corresponding text discuss a fuse guard ring. For example, Figure 3 of Shih includes, but is not limited to, a fuse 41, first and second polysilicon lines 22A and 22B, first fuse plugs 28A and 28B, first level metal fuse lines 31A and 31B and second fuse plugs 38A and 38B. The first fuse plugs 28A and 28B electrically couple the metal fuse lines 31A and 31B to the first and second polysilicon lines 22A and 22B. Similarly, second fuse plugs 38A and 38B electrically coupled the metal fuse lines 31A and 31B to the fuse 41. See Shih, column 8, lines 2-39. Furthermore, Figures 1 through 4 also illustrate and the corresponding text discusses various insulation layers in which the fuse plugs are positioned and on which the lines are provided. However, nothing in Figures 1

In re: Hyun-Chul Kim
Serial No.: 10/663,967
Filed: September 16, 2003
Page 10 of 11

through 4 or the corresponding text of Shih appears to disclose or suggest a buffer pattern as recited in the claims of the present application. In particular, as discussed in the specification of the present application, the buffer pattern as recited in the claims of the present invention may provide a buffering function during, for example, a repairing process, which may reduce an impact applied to the substrate by a laser beam. See Specification, page 8, lines 11-18. Accordingly, if the rejection of Claim 9 is maintained, Applicant respectfully requests that the elements which supposedly teach the recitations of Claim 9 be pointed out. In particular, Applicant requests that that the element which supposedly teaches a buffer pattern as recited in Claim 9 be pointed out.

Claim 9 has been amended to further clarify the position of the buffer patterns according to some embodiments of the present invention. In particular, Claim 9 recites, in part, "forming a conductive layer pattern and a buffer pattern on the integrated circuit substrate between the integrated circuit substrate and the window layer, the buffer pattern being between portions of the conductive layer pattern on the integrated circuit substrate." Thus, as illustrated in for example, Figure 1G of the present application, the buffer pattern 16a is between the portions of the conductive layer pattern 16b. Nothing in Shih discloses or suggests a buffer pattern as recited in amended Claim 9. As discussed above, Shih discusses polysilicon lines and metal fuse lines (conductive lines) which are coupled to first and second fuse plugs, but nothing in Shih discloses buffer patterns between the portions of the lines as recited in amended Claim 9. Accordingly, Applicant respectfully submits that amended Claim 9 is patentable over Shih for at least the reasons discussed herein. Furthermore, the dependent claims are patentable at least per the patentability of independent Claim 9 from which they depend.

Many of the dependent claims are also separately patentable. For example, Claims 11 and 13 recite forming a second buffer pattern and details associated with forming the first and second buffer patterns. As discussed above, nothing in Shih discloses or suggests one or more buffer patterns. Furthermore, it follows that nothing in Shih discloses or suggests the details with respect to the formation of the first and second buffer patterns. Accordingly, Claims 11 and 13 are separately patentable over Shih for at least these additional reasons.

In re: Hyun-Chul Kim
Serial No.: 10/663,967
Filed: September 16, 2003
Page 11 of 11

Claim 14 recites "forming a line pattern between the integrated circuit substrate and the second insulation layer adjacent the second buffer pattern." Again, as discussed above, nothing in Shih discusses a buffer pattern. Therefore, it follows that nothing in Shih discloses or suggests forming a line pattern adjacent the second buffer pattern as recited in Claim 14. Accordingly, Claim 14 is separately patentable over Shih for at least these additional reasons.

The New Claims are Patentable over Shih

New Claims 26 through 29 are patentable at least per the patentability of independent Claim 9 from which they depend. However, the new claims are also separately patentable. New Claims 26 through 29 recite various aspects of embodiments of the present invention with respect to the buffer patterns. As discussed above, nothing in Shih discloses or suggests buffer patterns as recited in the claims of the present application. Accordingly, new Claims 26 through 29 are separately patentable for at least these additional reasons.

CONCLUSION

Applicant respectfully submits that the pending claims are patentable over the cited references for at least the reasons discussed herein. Accordingly, Applicant respectfully submits that the pending claims are in condition for allowance, which is respectfully requested in due course.

Respectfully submitted,



Elizabeth A. Stanek
Registration No.: 48,568

USPTO Customer No. 20792
Myers Bigel Sibley & Sajovec
Post Office Box 37428
Raleigh, North Carolina 27627
Telephone: 919/854-1400
Facsimile: 919/854-1401

CERTIFICATION OF FACSIMILE TRANSMISSION UNDER 37 CFR § 1.8

I hereby certify that this correspondence is being transmitted by facsimile to the U.S. Patent and Trademark Office on September 22, 2005 via facsimile number 571-273-8300.



Erin A. Campion